

## ICMneo

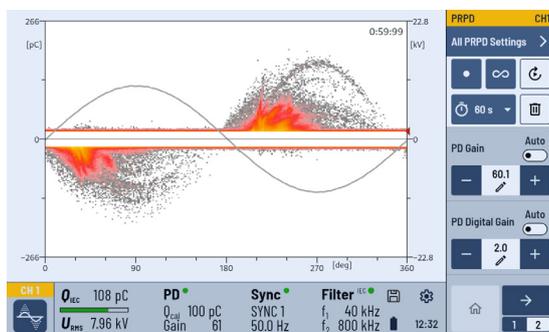
### Digital PD test and measurement device



- Stand-alone, modular partial discharge measurement device suitable for a range of high-voltage assets
- Factory acceptance tests (FAT) and measurements according to IEC 60270
- Four parallel measurement channels
- High modularity and robustness
- User-friendly interface

#### DESCRIPTION

The ICMneo is a compact, stand-alone, digital partial discharge measuring device used to evaluate the condition of medium and high voltage insulation. It is typically used for quality assurance, including factory acceptance testing, end-of-line testing, and post-repair testing. It is also suitable for use in the field.



The ICMneo is primarily intended for use with the following assets:

- Factory acceptance tests for MV and HV assets
- Distribution transformers
- Instrument transformers (voltage transformers and current transformers)
- Rotating machines
- Electronic components (i.e., IGBTs)
- HV components such as bushings, insulators, and capacitors

#### YOUR ADVANTAGES

- Prevention of asset breakdowns and system failures by early identification of insulation defects
- Ensure quality assurance
- Flexible configuration for all assets by changing the accessories
- Stand-alone, battery-operated device with touchscreen operation for up to five hours

#### STANDARD FEATURES

As a versatile PD measurement device, the ICMneo offers the following features and options:

- Battery operation for up to 5 hours
- 4-channel real-time parallel measurement
- PD spectrum analysis
- High voltage measurement
- Synchronisation frequency from 5 Hz to 510 Hz
- DAkkS calibrated voltage measurement
- Effective noise gating for blocking phase-stable or phase-independent noises
- High resolution phase-resolved PD patterns



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### ACCESSORIES

The ICMneo can be combined with various accessories to perform an optimal measurement. The following accessories are recommended:

- Pre-amplifiers of the RPA series
- Frequency converter unit FCU2
- Coupling capacitors
- Quadrupoles
- Current transformers
- Disturbance antenna DA1
- DAkKs certified calibration impulse generators

For more details and ordering information on our accessories, please refer to our accessories catalogue.



### SPECIFICATIONS

#### OPERATIONAL

Mains supply	100–240 V AC, 50/60 Hz
Line fuse	2 A slow-blow
Power requirements	Max. 100 W
Battery running time	Up to 5 hours
Battery charging time	2 hours (80 %) 3 hours (100 %)
Battery type	97.9 Wh Li-Ion
Display size	7" (152.40 x 91.44 mm)
Display resolution	800 x 480 pixels
Operation	Controlled via touchscreen and rotary knob
Operation temperature	-20–45 °C (non-condensing) 0–35 °C (while charging)
Number of measurement channels	4 (PD), 4 (Sync)
Input impedance	50 Ω or 1 kΩ (software selectable)
Input sensitivity	< 100 μV RMS/0.1 pC (without pre-amplifiers)
Lower analogue frequency limit, -6dB	30 kHz
Analogue lowpass filter, -6dB	1, 2, 3, 4, 5, 10, 30 MHz (software selectable)
Gain range	1 to 1000 or 0.05 to 50 with internal attenuator
A/D converter	14 bits (bipolar), 200 MS/s
Gating modes	Analogue or digital window gating with up to three windows

Calibration modes	Normal and adaptive
Pre-processing compatibility	Megger pre-amplifiers and pre-processing units, i.e., RPA1 series, RPA2 series, RPA3 series, RPA4, and FCU2
Display modes	Scope, Projection, Spectrum, Reports, PRPD, HVM, DSO, Calibration, Meter, Trending

#### ENCLOSURE

Ingress protection class	IP65 (closed), IP20 (open)
Connectors	10x BNC, female: CH1–CH4 (PD input channels), SYNC1–SYNC4 (synchronisation channels), TTL GATE, TTL SYNC
Ground terminal	M5 bolt
Communication interfaces	USB (USB-A), TCP/IP (RJ45)
Size (W x D x H)	314 x 285 x 185 mm <sup>3</sup> (closed) 314 x 342 x 393 mm <sup>3</sup> (open)
Weight	4.6 kg

#### STANDARD PD MODE (IEC 60270)

Lower cut-off (-6 dB)	30 kHz to 990 kHz
Upper cut-off (-6 dB)	130 kHz to 1 MHz

#### FULL RANGE MODE

Centre frequency	30 kHz to 30 MHz
Bandwidth	9 kHz to 900 kHz

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### SYNCHRONISATION/HVM

Synchronisation modes	External, line, internal, TTL
Synchronisation frequency	5 to 510 Hz
Maximum voltage	200 V <sub>peak</sub> (140 V RMS), 100 V RMS nominal
A/D converter	12 bits (bipolar), up to 400 kS/s (variable)
Input impedance	10 MΩ

### STANDARDS

Electromagnetic compatibility EMC	EN IEC 61326-1:2021
Health parameters	EN IEC 62311:2020
Ingress protection	EN 60529:1991
Environmental	EN 60068-2-1:2007, EN 60068-2-2:2007, DIN EN IEC 60068-2-78:2025
Transport and handling	DIN EN IEC 60721-3-2

### PRE-AMPLIFIERS (OPTIONAL)

#### Input impedance

RPA1/RPA1D/RPA1G/RPA4	10 kΩ    50 pF
RPA1L/RPA1H	1 kΩ    50 pF
RPA2/RPA3	50 Ω    50 pF
FCU2	50 Ω    50 pF

#### Input sensitivity

RPA1/RPA1D/RPA1G/RPA4	< 50 μV RMS/0.03 pC
RPA1L	< 15 μV RMS/0.02 pC
RPA1H	< 40 μV RMS/0.05 pC
RPA2	< 800 μV RMS
RPA3	< 2 mV RMS
FCU2	< 200 μV RMS

#### Bandwidth

RPA1/RPA1D/RPA1G/RPA4	40 kHz to 1 MHz
RPA1L/RPA1H	40 kHz to 20 MHz
RPA2	2 to 20 MHz
RPA3	200 MHz to 1 GHz
FCU2	100 MHz to 1800 MHz



### ORDERING INFORMATION

Description	Order no.
ICMneo	PX10700
Cable set for ICMneo	PX10702

**Set of measuring cables is NOT included with the instrument and must be ordered separately.**

### SALES OFFICE

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### ICMneo\_DS\_e1.03

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ISO 9001, ISO 14001,  
 ISO 17025, ISO 27001, ISO 4501

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